Opportunity Title: Postgraduate Research Opportunity in Ecology (GIS/Statistics)

Opportunity Reference Code: USDA-USFS-2019-0048

Organization	U.S. Department of Agriculture (USDA)
Reference Code	USDA-USFS-2019-0048
How to Apply	A complete application package consists of:

ORISE

A complete application package consists of:

- An application
- Transcript(s) – For this opportunity, an unofficial transcript or copy of the student academic records printed by the applicant or by academic advisors from internal institution systems may be submitted. Selected candidate must provide proof of completion of the degree before the appointment can start. Proof must be sent to ORISE directly from the academic institution including graduation date and degree awarded. All transcripts must be in English or include an official English translation. Click **Here** for detailed information about acceptable transcripts.
- A current resume/CV
- Two educational or professional recommendations

If you have questions, send an email to USForestService@orise.orau.gov. Please include the reference code for this opportunity in your email.

Application Deadline

5/13/2019 3:00:00 PM Eastern Time Zone

Description

A research opportunity is available with the US Forest Service (USFS), Pacific Northwest Research Station, Wenatchee Forestry Sciences Laboratory located in Wenatchee, Washington.

The research participant will collaborate with Forest Service scientists on research related to the effects of disturbances and climate change on dry coniferous forest ecosystems of the Pacific Northwest. Potential research topics include wildlife habitat analysis, predicting and monitoring change in forests, post-fire vegetation recovery, restoration treatment effectiveness, and tree growth responses to climatic variability. The research participant will be involved as a team member with skills in spatial and statistical analyses and will contribute to written reports and publications.

Appointment activities include:

- Conducting spatial analyses using GIS software (e.g., ArcGIS or R) to support ecological and forest management research at varying spatial scales (e.g., watershed, landscape, or regional)
- Conducting statistical analyses of ecological data
- Acquiring and managing spatial and non-spatial data for proposals, publications, and analyses
- Designing, populating, and managing databases for research data archival and retrieval
- Writing scripts and programs (e.g., in R or Python) for use with GIS, database, and statistical analyses
- Contributing to research publications by conducting literature searches; writing text; creating tables, graphs, and maps; and formatting manuscripts

Learning objectives for this appointment include:

1. Improving the participant's knowledge and experience applying quantitative methods - including GIS-based spatial analyses and statistical modeling methods - to generate knowledge that improves our understanding of forest ecosystem responses to disturbances and climatic variability
2. Learning how new and existing ecological knowledge can be applied to better inform forest management practices and policy decisions

Anticipated Appointment Start Date: June 3, 2019

This program, administered by ORAU through its contract with the U.S. Department of Energy (DOE) to manage the Oak Ridge Institute for Science and Education (ORISE), was established through an interagency agreement between DOE and the U.S. Forest Service (USFS). The initial appointment is for one year, but may be renewed upon recommendation of USFS contingent on the availability of funds. The participant will receive a monthly stipend of $4,800 and a relocation allowance of up to $3,000 to reimburse moving costs. The participant must show proof of health and medical insurance. Health insurance can be obtained through ORISE. The appointment is full-time at USFS in the Wenatchee, Washington, area. Participants do not become employees of USFS, DOE or the program administrator, and there are no employment-related

Opportunity Title: Postgraduate Research Opportunity in Ecology (GIS/Statistics)
Opportunity Reference Code: USDA-USFS-2019-0048

benefits.

This opportunity is available to U.S. citizens only.

For more information about the USFS Research Participation Program, please visit the **Program Website.**

Qualifications

The qualified candidate should have received a master's or doctoral degree in one of the relevant fields.

Preferred skills:

- Demonstrated experience in spatial data analysis, including both conceptual knowledge and practical skills with geographic information systems (ArcGIS and/or R)
- Knowledge and experience in conducting statistical analyses (e.g., regression analysis, generalized linear models, linear mixed-effects models) and ecological community analysis (e.g., multivariate ordination, cluster analysis)
- Experience using R and/or SAS software to manipulate large datasets and conduct statistical analyses
- Willingness to improve knowledge and skills in the areas of geospatial modeling, multivariate statistics, machine learning, predictive modeling, landscape pattern analyses, multivariate analysis of ecological communities, and scientific writing
- Good understanding of object oriented languages such as Python, R
- Detail-oriented, thorough, well-organized, and effectively able to manage time
- Strong oral and written communication skills; ability to communicate technical information effectively

Eligibility Requirements

- **Citizenship:** U.S. Citizen Only
- **Degree:** Master's Degree or Doctoral Degree.
- **Discipline(s):**
  - **Computer, Information, and Data Sciences** (1 👁)
  - **Earth and Geosciences** (2 👁)
  - **Environmental and Marine Sciences** (9 👁)
  - **Life Health and Medical Sciences** (6 👁)
  - **Mathematics and Statistics** (2 👁)
  - **Social and Behavioral Sciences** (1 👁)